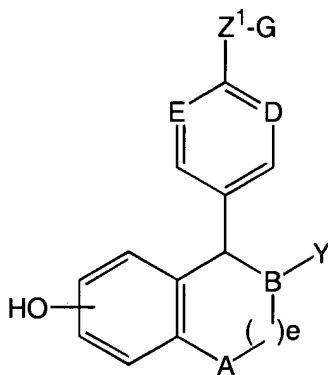


Amendments to the Claims

1. (Previously presented) A method for treating sexual arousal disorder comprising:  
administering to a female subject in need thereof, an effective amount of an estrogen agonist / antagonist, and optionally,  
co-administering an effective amount of a cyclic guanosine 3',5'-monophosphate elevator.

2. (Currently amended) A The method as in ~~The method as in~~ of claim 1 wherein said estrogen agonist / antagonist is a compound of the following formula (I): ~~is a compound of the following formula (I):~~



(I)

wherein:

A is selected from CH<sub>2</sub> and NR;

B, D and E are independently selected from CH and N;

Y is

- (a) phenyl, optionally substituted with 1-3 substituents independently selected from R<sup>4</sup>;
- (b) naphthyl, optionally substituted with 1-3 substituents independently selected from R<sup>4</sup>;
- (c) C<sub>3</sub>-C<sub>8</sub> cycloalkyl, optionally substituted with 1-2 substituents independently selected from R<sup>4</sup>;
- (d) C<sub>3</sub>-C<sub>8</sub> cycloalkenyl, optionally substituted with 1-2 substituents independently selected from R<sup>4</sup>;

(e) a five membered heterocycle containing up to two heteroatoms selected from the group consisting of -O-, -NR<sup>2</sup>- and -S(O)<sub>n</sub>-, optionally substituted with 1-3 substituents independently selected from R<sup>4</sup>;

(f) a six membered heterocycle containing up to two heteroatoms selected from the group consisting of -O-, -NR<sup>2</sup>- and -S(O)<sub>n</sub>-, optionally substituted with 1-3 substituents independently selected from R<sup>4</sup>; or

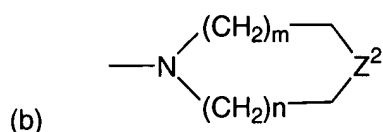
(g) a bicyclic ring system consisting of a five or six membered heterocyclic ring fused to a phenyl ring, said heterocyclic ring containing up to two heteroatoms selected from the group consisting of -O-, -NR<sup>2</sup>- and -S(O)<sub>n</sub>-, optionally substituted with 1-3 substituents independently selected from R<sup>4</sup>;

Z<sup>1</sup> is

- (a) -(CH<sub>2</sub>)<sub>p</sub> W(CH<sub>2</sub>)<sub>q</sub>-;
- (b) -O(CH<sub>2</sub>)<sub>p</sub> CR<sup>5</sup>R<sup>6</sup>-;
- (c) -O(CH<sub>2</sub>)<sub>p</sub>W(CH<sub>2</sub>)<sub>q</sub>-;
- (d) -OCHR<sup>2</sup>CHR<sup>3</sup>-; or
- (e) -SCHR<sup>2</sup>CHR<sup>3</sup>-;

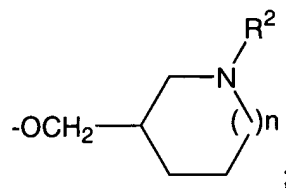
G is

- (a) -NR<sup>7</sup>R<sup>8</sup>;



wherein n is 0, 1 or 2; m is 1, 2 or 3; Z<sup>2</sup> is -NH-, -O-, -S-, or -CH<sub>2</sub>-; optionally fused on adjacent carbon atoms with one or two phenyl rings and, optionally independently substituted on carbon with one to three substituents and, optionally, independently on nitrogen with a chemically suitable substituent selected from R<sup>4</sup>; or

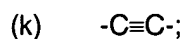
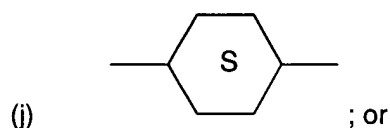
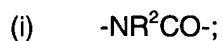
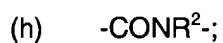
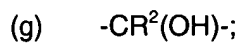
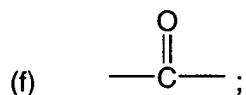
(c) a bicyclic amine containing five to twelve carbon atoms, either bridged or fused and optionally substituted with 1-3 substituents independently selected from R<sup>4</sup>; or



Z<sup>1</sup> and G in combination may be

W is

- (a)  $-\text{CH}_2-$ ;
- (b)  $-\text{CH}=\text{CH}-$ ;
- (c)  $-\text{O}-$ ;
- (d)  $-\text{NR}^2-$ ;
- (e)  $-\text{S}(\text{O})_n-$ ;



R is hydrogen or  $\text{C}_1$ - $\text{C}_6$  alkyl;

$\text{R}^2$  and  $\text{R}^3$  are independently

- (a) hydrogen; or
- (b)  $\text{C}_1$ - $\text{C}_4$  alkyl;

$\text{R}^4$  is

- (a) hydrogen;
- (b) halogen;
- (c)  $\text{C}_1$ - $\text{C}_6$  alkyl;
- (d)  $\text{C}_1$ - $\text{C}_4$  alkoxy;
- (e)  $\text{C}_1$ - $\text{C}_4$  acyloxy;
- (f)  $\text{C}_1$ - $\text{C}_4$  alkylthio;
- (g)  $\text{C}_1$ - $\text{C}_4$  alkylsulfinyl;
- (h)  $\text{C}_1$ - $\text{C}_4$  alkylsulfonyl;
- (i) hydroxy ( $\text{C}_1$ - $\text{C}_4$ )alkyl;
- (j) aryl ( $\text{C}_1$ - $\text{C}_4$ )alkyl;
- (k)  $-\text{CO}_2\text{H}$ ;
- (l)  $-\text{CN}$ ;
- (m)  $-\text{CONHOR}$ ;
- (n)  $-\text{SO}_2\text{NHR}$ ;
- (o)  $-\text{NH}_2$ ;

- (p) C<sub>1</sub>-C<sub>4</sub> alkylamino;
- (q) C<sub>1</sub>-C<sub>4</sub> dialkylamino;
- (r) -NHSO<sub>2</sub>R;
- (s) -NO<sub>2</sub>;
- (t) -aryl; or
- (u) -OH;

R<sup>5</sup> and R<sup>6</sup> are independently C<sub>1</sub>-C<sub>8</sub> alkyl or together form a C<sub>3</sub>-C<sub>10</sub> carbocyclic ring;

R<sup>7</sup> and R<sup>8</sup> are independently

- (a) phenyl;
- (b) a C<sub>3</sub>-C<sub>10</sub> carbocyclic ring, saturated or unsaturated;
- (c) a C<sub>3</sub>-C<sub>10</sub> heterocyclic ring containing up to two heteroatoms, selected from -O-, -N- and -S-;
- (d) H;
- (e) C<sub>1</sub>-C<sub>6</sub> alkyl; or
- (f) form a 3 to 8 membered nitrogen containing ring with R<sup>5</sup> or R<sup>6</sup>;

R<sup>7</sup> and R<sup>8</sup> in either linear or ring form may optionally be substituted with up to three substituents independently selected from C<sub>1</sub>-C<sub>6</sub> alkyl, halogen, alkoxy, hydroxy and carboxy;

a ring formed by R<sup>7</sup> and R<sup>8</sup> may be optionally fused to a phenyl ring;

e is 0, 1 or 2;

m is 1, 2 or 3;

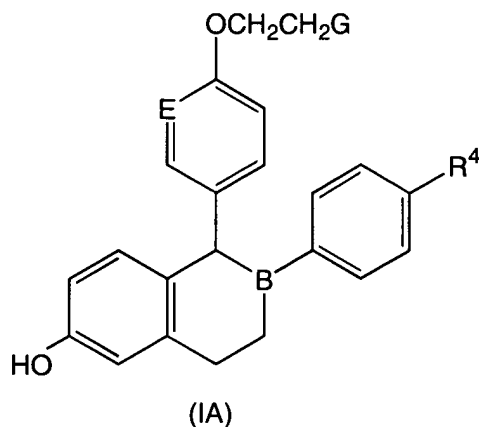
n is 0, 1 or 2;

p is 0, 1, 2 or 3;

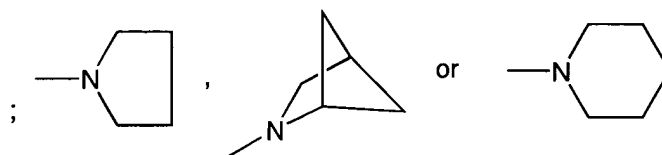
q is 0, 1, 2 or 3;

or an optical or geometric isomer thereof; or a pharmaceutically acceptable salt, N-oxide, ester, quaternary ammonium salt or prodrug thereof.

3. (Currently amended) A The method ~~as in~~ of claim 2 wherein said estrogen agonist / antagonist is a compound of formula (IA):



wherein G is



$R^4$  is H, OH, F, or Cl; and B and E are independently selected from CH and N or an optical or geometric isomer thereof; or a pharmaceutically acceptable salt, N-oxide, ester, quaternary ammonium salt, or a prodrug thereof.

4. (Currently amended) A The method as in of claim 3 wherein said estrogen agonist / antagonist is (-)-cis-6-phenyl-5-[4-(2-pyrrolidin-1-yl-ethoxy)-phenyl]-5,6,7,8-tetrahydro-naphthalene-2-ol or an optical or geometric isomer thereof; a pharmaceutically acceptable salt, N-oxide, ester, quaternary ammonium salt, or a prodrug thereof.

5. (Currently amended) A The method as in of claim 4 wherein said estrogen agonist / antagonist is in the form of a D-tartrate salt.

Claims 6.-9. (canceled)

10. (Currently amended) A method for treating sexual arousal disorder comprising:  
administering to a female subject in need thereof, an effective amount of an estrogen agonist / antagonist, and as in claim 1 further comprising co-administrating a cyclic guanosine 3',5'-monophosphate elevator.

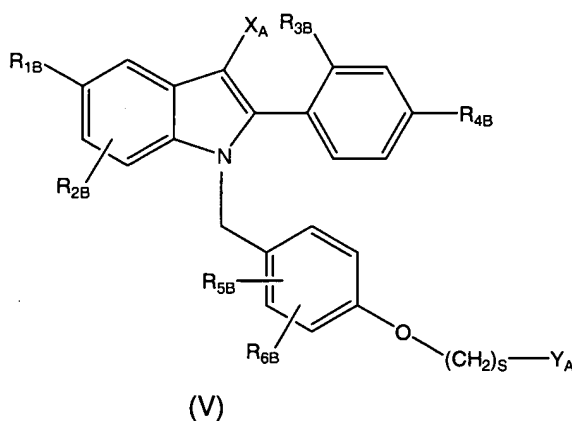
11. (Currently amended) A The method ~~as in~~ of claim 10 wherein said cyclic guanosine 3',5'-monophosphate elevator is a PDE<sub>v</sub> phosphodiesterase inhibitor.

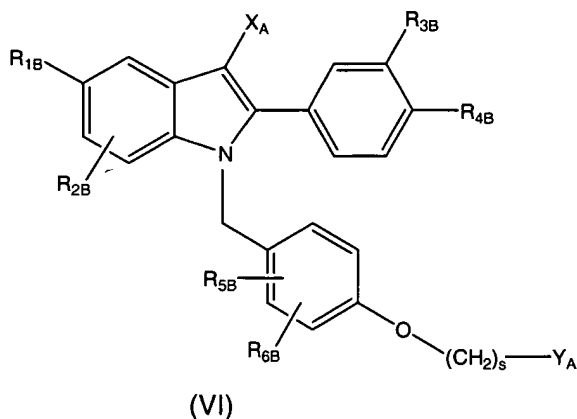
12. (Currently amended) A The method ~~as in~~ of claim 11 wherein the PDE<sub>v</sub> phosphodiesterase inhibitor is 1-[[3-(6,7-dihydro-1-methyl-7-oxo-3-propyl-1H-pyrazolo[4,3-d]pyrimidin-5-yl)-4-ethoxy-phenyl]sulfonyl]-4-methylpiperazine citrate salt.

Claims 13.-39. (canceled)

40. (Currently amended) A The method ~~as in~~ of claim 1 wherein said estrogen agonist / antagonist is selected from the group consisting of tamoxifen, 4-hydroxy tamoxifen, raloxifene, toremifene, centchroman, idoxifene, 6-(4-hydroxy-phenyl)-5-[4-(2-piperidin-1-yl-ethoxy)-benzyl]-naphthalen-2-ol, {4-[2-(2-aza-bicyclo[2.2.1]hept-2-yl)-ethoxy]-phenyl}-[6-hydroxy-2-(4-hydroxy-phenyl)-benzo[b]thiophen-3-yl]-methanone, EM-652, EM-800, GW 5638, GW 7604, and optical or geometric isomers thereof; and pharmaceutically acceptable salts, N-oxides, esters, quaternary ammonium salts, and prodrugs thereof.

41. (Currently amended) A The method ~~as in~~ of claim 1 wherein said estrogen agonist / antagonist is a compound selected from the formulas V or VI:





wherein:

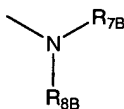
$R_{1B}$  is selected from H, OH, -O-C(O)-C<sub>1</sub>-C<sub>12</sub> alkyl (straight chain or branched), -O-C<sub>1</sub>-C<sub>12</sub> alkyl (straight chain or branched or cyclic), or halogens or C<sub>1</sub>-C<sub>4</sub> halogenated ethers,

$R_{2B}$ ,  $R_{3B}$ ,  $R_{4B}$ ,  $R_{5B}$ , and  $R_{6B}$  are independently selected from H, OH, -O-C(O)-C<sub>1</sub>-C<sub>12</sub> (straight chain or branched), -O-C<sub>1</sub>-C<sub>12</sub> (straight chain or branched or cyclic), halogens, or C<sub>1</sub>-C<sub>4</sub> halogenated ethers, cyano, C<sub>1</sub>-C<sub>6</sub> alkyl (straight chain or branched), or trifluoromethyl, with the proviso that, when  $R_{1B}$  is H,  $R_{2B}$  is not OH;

$X_A$  is selected from H, C<sub>1</sub>-C<sub>6</sub> alkyl, cyano, nitro, trifluoromethyl, and halogen;

s is 2 or 3;

$Y_A$  is the moiety:



wherein:

a)  $R_{7B}$  and  $R_{8B}$  are independently selected from the group of H, C<sub>1</sub>-C<sub>6</sub> alkyl, or phenyl optionally substituted by CN, C<sub>1</sub>-C<sub>6</sub> alkyl (straight chain or branched), C<sub>1</sub>-C<sub>6</sub> alkoxy (straight chain or branched), halogen, -OH, -CF<sub>3</sub>, or -OCF<sub>3</sub>; or

b)  $R_{7B}$  and  $R_{8B}$  are concatenated to form a five-membered saturated heterocycle containing one nitrogen heteroatom, the heterocycle being optionally substituted with

1-3 substituents independently selected from the group consisting of hydrogen, hydroxyl, halo, C<sub>1</sub>-C<sub>4</sub> alkyl, trihalomethyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, trihalomethoxy, C<sub>1</sub>-C<sub>4</sub> acyloxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, hydroxy (C<sub>1</sub>-C<sub>4</sub>)alkyl, -CO<sub>2</sub>H, -CN, -CONHR<sub>1B</sub>, -NH<sub>2</sub>, -NH(C<sub>1</sub>-C<sub>4</sub> alkyl), -N(C<sub>1</sub>-C<sub>4</sub> alkyl)<sub>2</sub>, -NHSO<sub>2</sub>R<sub>1B</sub>, -NHCOR<sub>1B</sub>, -NO<sub>2</sub>, or phenyl optionally substituted with 1-3 (C<sub>1</sub>-C<sub>4</sub>)alkyl; or

c) R<sub>7B</sub> and R<sub>8B</sub> are concatenated to form a six-membered saturated heterocycle containing one nitrogen heteroatom, the heterocycle being optionally substituted with 1-3 substituents independently selected from the group consisting of hydrogen, hydroxyl, halo, C<sub>1</sub>-C<sub>4</sub> alkyl, trihalomethyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, trihalomethoxy, C<sub>1</sub>-C<sub>4</sub> acyloxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, hydroxy (C<sub>1</sub>-C<sub>4</sub>)alkyl, -CO<sub>2</sub>H, -CN, -CONHR<sub>1B</sub>, -NH<sub>2</sub>, -NH(C<sub>1</sub>-C<sub>4</sub> alkyl), -N(C<sub>1</sub>-C<sub>4</sub> alkyl)<sub>2</sub>, -NHSO<sub>2</sub>R<sub>1B</sub>, -NHCOR<sub>1B</sub>, -NO<sub>2</sub>, or phenyl optionally substituted with 1-3 (C<sub>1</sub>-C<sub>4</sub>)alkyl; or

d) R<sub>7B</sub> and R<sub>8B</sub> are concatenated to form a seven-membered saturated heterocycle containing one nitrogen heteroatom, the heterocycle being optionally substituted with 1-3 substituents independently selected from the group consisting of hydrogen, hydroxyl, halo, C<sub>1</sub>-C<sub>4</sub> alkyl, trihalomethyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, trihalomethoxy, C<sub>1</sub>-C<sub>4</sub> acyloxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, hydroxy (C<sub>1</sub>-C<sub>4</sub>)alkyl, -CO<sub>2</sub>H, -CN, -CONHR<sub>1B</sub>, -NH<sub>2</sub>, -NH(C<sub>1</sub>-C<sub>4</sub> alkyl), -N(C<sub>1</sub>-C<sub>4</sub> alkyl)<sub>2</sub>, -NHSO<sub>2</sub>R<sub>1B</sub>, -NHCOR<sub>1B</sub>, -NO<sub>2</sub>, or phenyl optionally substituted with 1-3 (C<sub>1</sub>-C<sub>4</sub>)alkyl; or

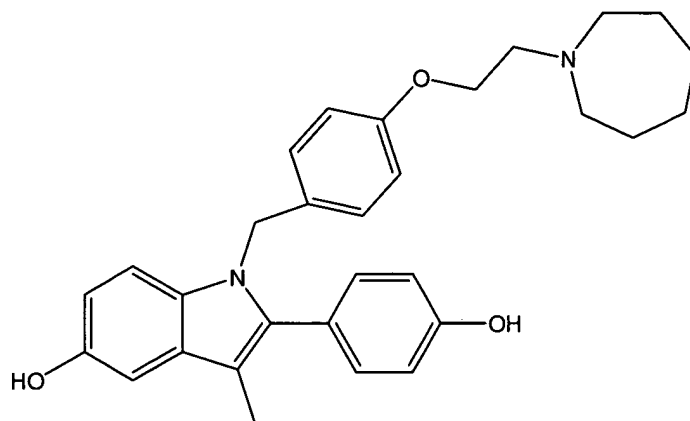
e) R<sub>7B</sub> and R<sub>8B</sub> are concatenated to form an eight-membered saturated heterocycle containing one nitrogen heteroatom, the heterocycle being optionally substituted with 1-3 substituents independently selected from the group consisting of hydrogen, hydroxyl, halo, C<sub>1</sub>-C<sub>4</sub> alkyl, trihalomethyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, trihalomethoxy, C<sub>1</sub>-C<sub>4</sub> acyloxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, hydroxy (C<sub>1</sub>-C<sub>4</sub>)alkyl, -CO<sub>2</sub>H, -CN, -CONHR<sub>1</sub>, -NH<sub>2</sub>, -NH(C<sub>1</sub>-C<sub>4</sub> alkyl), -N(C<sub>1</sub>-C<sub>4</sub> alkyl)<sub>2</sub>, -NHSO<sub>2</sub>R<sub>1B</sub>, -NHCOR<sub>1B</sub>, -NO<sub>2</sub>, or phenyl optionally substituted with 1-3 (C<sub>1</sub>-C<sub>4</sub>)alkyl; or

f) R<sub>7B</sub> and R<sub>8B</sub> are concatenated to form a saturated bicyclic heterocycle containing from 6-12 carbon atoms either bridged or fused and containing one nitrogen heteroatom, the heterocycle being optionally substituted with 1-3 substituents independently selected from the group consisting of hydrogen, hydroxyl, halo, C<sub>1</sub>-C<sub>4</sub> alkyl, trihalomethyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, trihalomethoxy, C<sub>1</sub>-C<sub>4</sub> acyloxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-



C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, hydroxy (C<sub>1</sub>-C<sub>4</sub>)alkyl, -CO<sub>2</sub> H, -CN, - CONHR<sub>1B</sub>, -NH<sub>2</sub>, -NH(C<sub>1</sub>-C<sub>4</sub> alkyl), -N(C<sub>1</sub>-C<sub>4</sub> alkyl)<sub>2</sub>, -NHSO<sub>2</sub>R<sub>1B</sub>, -NHCOR<sub>1B</sub>, -NO<sub>2</sub>, or phenyl optionally substituted with 1-3 (C<sub>1</sub>-C<sub>4</sub>) alkyl; or an optical or geometric isomer thereof; or a pharmaceutically acceptable salt, N-oxide, ester, quaternary ammonium salt or prodrug thereof.

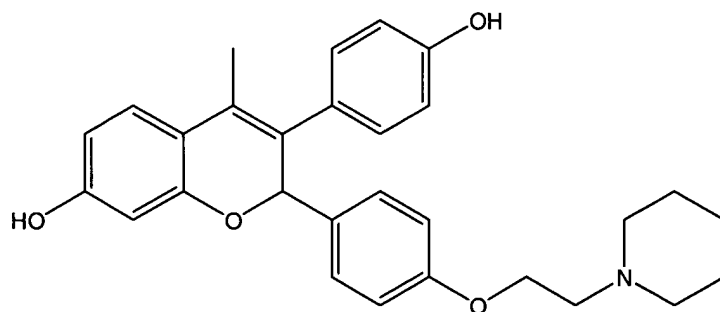
42. (Currently amended) A The method as in of claim 41 wherein said estrogen agonist / antagonist is the compound, TSE-424, of formula Va below:



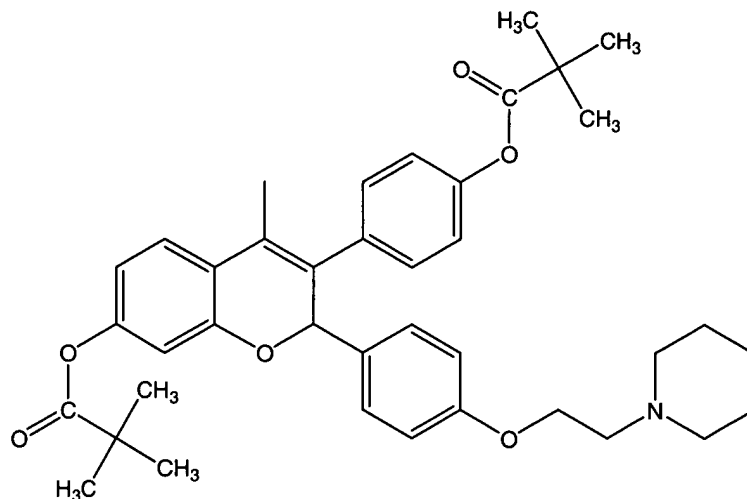
(Va)

or an optical or geometric isomer thereof; or a pharmaceutically acceptable salt, N-oxide, ester, quaternary ammonium salt or prodrug thereof.

43. (Currently amended) A The method as in of claim 1 wherein said estrogen agonist / antagonist is EM-652 of formula III below or is EM-800 of formula IV below:



(III)



(IV)

or an optical or geometric isomer thereof; or a pharmaceutically acceptable salt, N-oxide, ester, quaternary ammonium salt or prodrug thereof.

44. (New) A method for treating sexual arousal disorder comprising:  
administering to a female subject in need thereof, an effective amount of (-)-cis-6-phenyl-5-[4-(2-pyrrolidin-1-yl-ethoxy)-phenyl]-5,6,7,8-tetrahydro-naphthalene-2-ol or an optical or geometric isomer thereof; a pharmaceutically acceptable salt, N-oxide, ester, quaternary ammonium salt, or a prodrug thereof.

45. (New) The method of claim 44 wherein (-)-cis-6-phenyl-5-[4-(2-pyrrolidin-1-yl-ethoxy)-phenyl]-5,6,7,8-tetrahydro-naphthalene-2-ol, D-tartrate salt is administered.

46. (New) The method of claim 44 further comprising co-administering an effective amount of a cyclic guanosine 3',5'-monophosphate elevator.

47. (New) The method of claim 46 wherein the cyclic guanosine 3',5'-monophosphate elevator is a PDE<sub>v</sub> phosphodiesterase inhibitor.

48. (New) The method of claim 47 wherein the PDE<sub>v</sub> phosphodiesterase inhibitor is 1-[[3-(6,7-dihydro-1-methyl-7-oxo-3-propyl-1H-pyrazolo[4,3-d]pyrimidin-5-yl)-4-ethoxy-phenyl]sulfonyl]-4-methylpiperazine citrate salt.

49. (New) The method of claim 45 further comprising co-administering an effective amount of 1-[[3-(6,7-dihydro-1-methyl-7-oxo-3-propyl-1H-pyrazolo[4,3-d]pyrimidin-5-yl)-4-ethoxy-phenyl]sulfonyl]-4-methylpiperazine citrate salt.

50. (New) The method of claim 45 wherein the female subject is postmenopausal.

51. (New) The method of claim 45 wherein the female subject is premenopausal.

52. (New) The method of claim 49 wherein the female subject is postmenopausal.

53. (New) The method of claim 49 wherein the female subject is premenopausal.